

AMENDMENTS TO THE SPECIFICATION

Please amend the heading at line 11 of page 1 as indicated:

Description of the ~~prior~~ Prior Art

Please amend the second full paragraph on page 1 as indicated:

These days, it is under detailed discussion at international standardization conferences, a such as 3GPP and a-3GPP2 conferences, that an ~~whole-entire~~ network of a 3G system is to be configured ~~with~~ as an ALL IP network based on an IP (IP = ~~internet~~ Internet ~~protocol~~ Protocol).

Please amend the third full paragraph on page 1 as indicated:

The ALL IP network is ~~researched~~ based on a ~~mobile~~ Mobile IP of an IETF (IETF = ~~international~~ International ~~engineering~~ Engineering ~~task~~ Task ~~force~~ Force). In the ~~mobile~~ Mobile IP case, a two-tier address system is adopted for an address conversion technique at ~~an~~ the IP layer. In other words, a first address is a COA (COA = care-of address) that is used for a-path assignment and ~~a-for~~ transferring ~~manner~~ data. A second address is a home address that is a unique home address of a mobile host and is used for identifying the mobile host and for session connection.

Please amend the fourth full paragraph on page 1 (spanning pages 1 and 2) as indicated:

A unique ~~internet-Internet~~ Internet address called a home address is assigned to a mobile station for the ALL IP network, wherein the unique ~~internet-Internet~~ address corresponds to a host name, ~~like-similar~~ to the case of an existing fixed host. Also, the mobile station for the ALL IP network has ~~an-a~~ a COA (care-of address) as a packet transfer point, wherein the COA gets changed as the mobile station for the ALL IP network moves between networks. At the present time, the IETF defines three components for a-mobile IP service: ~~such-as-a~~ a mobile node, ~~a-an~~ a HA (HA = home agent) and ~~a-an~~ a FA (FA = foreign agent) ~~as follows,~~ as described below.

Please amend the second full paragraph on page 2 as indicated:

The HA (home agent) is an agent included in a home network of a mobile node, wherein the home network manages a current COA (care-of address) and a home address of the mobile node. The HA (home agent) performs a tunneling function in order to transfer a datagram ~~of~~ addressed to the mobile node to a network ~~in-to~~ to which the mobile node is currently ~~included~~ attached when the mobile node is in an external (or foreign) network.

Please amend the third full paragraph on page 2 (spanning pages 2 and 3) as indicated:

The FA (foreign agent) is an agent assigning the COA (care-of address) when the mobile node is in the external network. The FA can assign an IP address ~~of thereof~~ as a COA or a temporary IP address ~~of to~~ the mobile node. The FA provides a routing service for any mobile node when the mobile node moves ~~in into~~ a service area covered by the FA. After performing a detunneling function on a datagram that was ~~tunnel functioned and receives from a HA tunneled from an HA~~ of the mobile node, the FA transfers the datagram to the mobile node. ~~In this case, the FA~~ The FA also provides an existing a gateway service for the datagram datagrams transmitted from the mobile node.

Please amend the first full paragraph on page 3 as indicated:

A standard model being ~~processed used at an in~~ ALL IP ~~Adhoc networks~~ defines an IPMM (IPMM = IP multi-media) domain and an ANSI-41 domain (ANSI = American National Standards ~~institute~~ Institute) for a core network. Here the IPMM domain is used for a packet service and the ANSI-41 domain is used for an existing circuit service. Protocols for the IPMM domain are based on ~~a mobile~~ Mobile IP, ~~a SIP the Session Initiation Protocol (SIP)~~ or the like. Protocols for the ANSI-41 domain are based on ~~an IS-2000, an IOS, an ANSI-41~~ or the like.

Please amend the second full paragraph on page 3 as indicated:

According to a model being currently ~~processed used~~, ~~one same a single~~ entity performs processing of a signal and a bearer in a radio network as shown in Fig. 1. However, this model can be unsuitable for development into an open type structure.

Please amend the third full paragraph on page 3 as indicated:

Currently, a message that a mobile station sends to request a connection is transmitted to ~~a~~an MSC (MSC = mobile switching center) via a BSC (BSC = base station controller) ~~in an~~ according to IS-2000. A ~~currently~~currently-operating BSC includes one entity for controlling a call-related signal and a bearer of user data and for providing a path.

Please amend the first full paragraph on page 4 as indicated:

Accordingly, it is required to configure the BSC ~~including to include~~ including to include a signal-related entity and a bearer-related entity to process the signal and the bearer separately.

Please amend the second full paragraph on page 4 as indicated:

It is an object of the present invention to provide a method for ~~a method for~~ separating and processing a signal and a bearer in an ALL IP radio access network and computer-readable ~~record~~recording media storing instructions for performing the method to perform a flexible configuration of a radio network based on ~~an~~ IP.

Please amend the third full paragraph on page 4 (spanning pages 4 and 5) as indicated:

In accordance with an aspect of the present invention, there is provided a method for processing a signal and a bearer separately in an ALL IP network system including one or more mobile stations, one or more radio networks and one or more core ~~network~~networks, the method including the steps of: transmitting a service request message from ~~the a~~ mobile station to ~~the a~~ radio network; at the radio network, determining whether a circuit-related service or a packet-related service is requested; if the circuit-related service is requested: (i) transmitting a CM service request message to a mobile switching center (MSC) server, (ii) receiving a service request acknowledgement message from the MSC server, and (iii) assigning a bearer in response to the service request acknowledgement message; and if the packet-related service is requested,; (i) transmitting the service request message from the radio network to ~~the a~~ core network without ~~performing any process-processing of~~ the service request message; (ii) at the core network, ~~performing a process-processing of~~ the service request message and transmitting an assignment request to the radio network, the assignment request requesting that the radio network to assign ~~the a~~ bearer for user data; and (iii) assigning the bearer in response to the assignment request.

Please amend the seventh full paragraph on page 6 as indicated:

At the step S20, ~~a~~an RNCS (radio network control system) of a RAN (radio access network) determines whether a first message related to a circuit service or a second message related to a packet service is received.

Please amend the first full paragraph on page 7 as indicated:

There are a plurality of ~~manner~~methods for service determination. Herein is provided a ~~manner~~method for the determination using an address of a TCP/IP header. In other words, since the packet service message is transmitted to a session manager of a core network, the address of the TCP/IP header has an address of the session manager. On the contrary, since the circuit service message is transmitted to a ~~a~~an MSC (MSC = mobile switching center) server of the core network, the address of the TCP/IP header has an address of the MSC server.

Please amend the second full paragraph on page 7 as indicated:

If the first (circuit service) message is received, at the step S30, the RNCS of the RAN transmits a CM service request message to the MSC server, wherein the CM service request message is generated in an IOS message form.

Please amend the fourth full paragraph on page 7 as indicated:

At the step S50, after receiving the CM service request Ack message, the RNCS transmits an assignment request message to the mobile station in order to assign a radio channel and then transmits a bearer assignment request message to a ~~a~~an RBF unit (RBF = radio bearer function) in order to assign a bearer for transmitting user data.

Please amend the fifth full paragraph on page 7 as indicated:

If the second (packet service) message is received, at the step S60, the RNCS transmits the second message to the session manager of the core network without any message processing.

Please amend the sixth full paragraph on page 7 (spanning pages 7 and 8) as indicated:

At the step S70, the session manager or a resource manager of the core network processes the second message and then requests that the RNCS ~~to assign the bearer in order to assign a bearer~~ for processing the user data.

Please amend the first full paragraph on page 8 as indicated:

At the step S80, the RNCS transmits a response message related to the service request to the mobile station and then transmits the bearer assignment request message to the RBF unit in order to assign the bearer for transmitting the user data.

Please amend the third full paragraph on page 8 as indicated:

In accordance with the present invention, there is an effect that a signal and a bearer are separated and processed in a RAN system of an ALL IP network to thereby facilitate network configuration of an open type structure, increase extension capability of each system and perform a flexible configuration of a network based on ~~an~~ IP.

Please amend the fourth full paragraph on page 8 as indicated:

Although the preferred embodiments of the invention have been disclosed for illustrative ~~purpose~~purposes, those skilled in the art will appreciate that various modifications, additions, and substitutions are possible, without departing from the scope and ~~spirit~~spirit of the invention as disclosed in the accompanying claims.